Med-HGW
5/23/90

Minnesota Pollution Control Agency

520 Lafayette Road, Saint Paul, Minnesota 55155

Telephone (612) 296-6300

Celebrate MINNESOTA 1990

SE0301-A0102

State Lead

EXECUTIVE SUMMARY
Nichols Ground Water Contamination
March 6, 1990

MND 985 681 246

Situation

In April, 1988 and July, 1989 volatile organic aromatic (VOA) compounds were detected in seven residential wells in the area of Highway 13 and Cedar Avenue in Eagan, Minnesota. The contaminants included perchloroethylene, trichloroethylene, chloroform, and dichlorodifluoromethane (freon). Perchloroethylene was the only contaminant that exceeded the Minnesota Department of Health (MDH) Recommended Allowable Limit of 6.6 ppb for drinking water. The Minnesota Pollution Control Agency (MPCA) declared an emergency situation and authorized the use of Minnesota Environmental Response Liability Act funds to provide bottled water to the affected residents. In addition to the presence of contaminants, a dewatering project at the nearby Metropolitan Waste Control Commission (MWCC) Seneca Waste Water Treatment Plant had drawn surficial water levels down to a point at which the residents could no longer obtain substantial water from their wells. In response to this dewatering effect, MWCC established permanent water service to the Eagan municipal water system. These hook-ups also served to remove the threat of contaminant consumption by the residents.

Based upon ground water collected it appears the contaminants are originating from a source(s) near Highway 13 and Cedar Avenue. Preliminary record searches and interviews with residents by both MPCA and Dakota County Health Department staff have failed to provide any substantial information concerning the origin of the contaminants. There are several municipal well systems (Cedar Grove, Burnsville, and Eagan) within a 3 and 4 mile radius of the area designated as the Site. However, it is unknown if contaminants have affected these municipal systems. It is unlikely the municipal well systems are or may be effected as they are located upgradient of the suspected source area.

The Nichols Meadow Fen (fen) is located downgradient of the Site and supports several endangered species of flora. Should contaminants reach the fen via ground water discharge these species may be affected. Ground water flow to the fen has been interrupted by the dewatering, therefore, an injection well system has been proposed to aid in restoration of natural ground water flow.

Non-Responsive

[redacted]

New Site

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MND	985 681 246

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Nichols Ground Water Contamination	Hwy 13 and Cedar Avenue

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Eagan	MN	55122	Dakota	037	3

09 COORDINATES LATITUDE	LONGITUDE
44 48 45.1	93 13 30.7

10 DIRECTIONS TO SITE (Starting from nearest public road)
intersection of Highway 77 (Cedar Avenue) and Highway 13, exact source unknown

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
unknown	

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
			( )

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Unknown	

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

13 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☒ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION ☒ YES ☐ NO DATE 4 / 10 / 89 (MONTH DAY YEAR) residential well sampling
BY (Check all that apply) ☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR ☒ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one) ☐ A. ACTIVE ☐ B. INACTIVE ☒ C. UNKNOWN

03 YEARS OF OPERATION ___ (BEGINNING YEAR) ___ (ENDING YEAR) ☒ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
perchloroethylene, trichloroethylene, chloroform, and dichlorodifluoromethane have been detected in residential wells

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
emergency action was taken to establish city water service to residents with affected wells. Nicols Meadow Fen may be impacted through ground water

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)			03 TELEPHONE NUMBER
Ron Swenson	MPCA			(612) 297-1793
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
Susan Price	MPCA	GWSW/PD	(612) 297 1784	02/08/90 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MN	

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A SOLID
- ☐ B POWDER FINES
- ☒ C SLUDGE
- ☐ D OTHER _____ (Specify)
- ☐ E SLURRY
- ☒ F LIQUID
- ☐ G GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TONS unknown
CUBIC YARDS _____
NO OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A TOXIC
- ☐ B CORROSIVE
- ☐ C RADIOACTIVE
- ☒ D PERSISTENT
- ☐ E SOLUBLE
- ☐ F INFECTIOUS
- ☐ G FLAMMABLE
- ☐ H IGNITABLE
- ☐ I HIGHLY VOLATILE
- ☐ J EXPLOSIVE
- ☐ K REACTIVE
- ☐ L INCOMPATIBLE
- ☐ M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	unknown		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers) residential well samples 7/20/80

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	perchloroethylene		unknown	290	ppb
	chloroform			1.1	
	dichlorodifluoro-methane			13	
	trichloroethylene			1.1	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references e g state files sample analysis reports)

MPCA GWSW/PD files MN Depart. of Natural Resources
Minnesota Geological Survey
Dakota County

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: MN	02 SITE NUMBER:

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A GROUNDWATER CONTAMINATION — 02 [X] OBSERVED (DATE 4/10/89) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 6213 — 04 NARRATIVE DESCRIPTION: 3-mile observed release documented through non-CLP lab on 2 separate sampling events. 4-mile radius includes Burnsville well for total population 37,574

01 [X] B SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION: potential exist for contamination of wetlands and Minnesota River if source is found to discharge through runoff and/or groundwater

01 [X] C CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION: unlikely, given the nature of ground water contamination

01 [X] D FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION: unknown

01 [X] E DIRECT CONTACT — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION: unknown

01 [X] F CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: unknown (Acres) — 04 NARRATIVE DESCRIPTION: Soil contamination is expected due to ground water contamination

01 [X] G DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION: See "ground water contamination"

01 [X] H WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION: unknown

01 [X] I POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION: unknown

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MN	

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

possible, it contaminants reach wetlands (Nicols Fen). endangered species present

01 ☒ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*

unknown

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

unknown

01 ☒ M UNSTABLE CONTAINMENT OF WASTES *(Spills/runoff/standing liquids/leaking drums)* — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 6213 — 04 NARRATIVE DESCRIPTION

01 ☒ N DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

unknown

01 ☒ O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

unknown

01 ☒ P ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

implied from ground water contamination

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 37,574

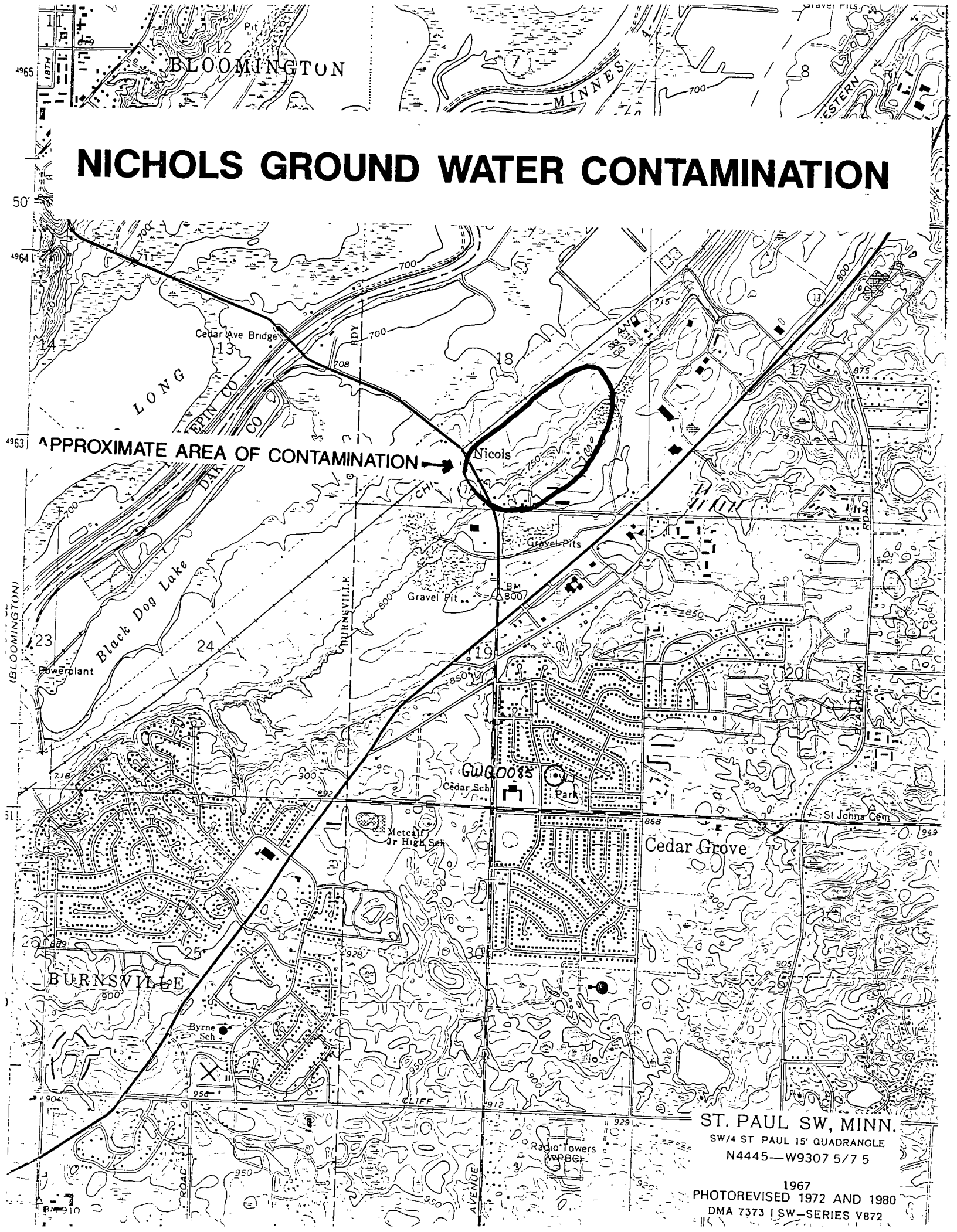
IV. COMMENTS

Source is unknown at this time

V. SOURCES OF INFORMATION *(Cite specific references e g , state files sample analysis reports)*

MPCA GWSW/PD Files
Minnesota Geological Survey

EPA FORM 2070-12 (7 81)


NICHOLS GROUND WATER CONTAMINATION
APPROXIMATE AREA OF CONTAMINATION
Nicols
Cedar Ave Bridge
LONG
EPIN CO
Black Dog Lake
Powerplant
BURNSVILLE
Gravel Pits
Gravel Pit
BM 800
GW0008S
Cedar Sch
Park
St Johns Cem
Cedar Grove
Metcalf Jr High Sch
Byrne Sch
CLIFF
Radio Towers WPBC
BLOOMINGTON
MINNES
ST. PAUL SW, MINN.
SW/4 ST PAUL 15' QUADRANGLE
N4445—W9307 5/7 5
1967
PHOTOREVISED 1972 AND 1980
DMA 7373 I SW—SERIES V872

REGION V FIT - PA DOCUMENTATION PACKAGE

SITE NAME Nichols Ground Water Contamination AKA(s): _____

ADDRESS Hwy 13 and Hwy 77 (Cedar Ave)

CITY Eagan STATE MN ZIP 55122 COUNTY Dakota

USEPA IDENTIFICATION NUMBER not assigned, new site

DOES THE FACILITY HAVE A RCRA PERMIT YES ___ NO ___ UNKNOWN X

IF THE FACILITY HAS A RCRA PERMIT, DOES IT COVER ALL EXISTING AND FORMER WASTE STORAGE, TRANSPORT, AND/OR DISPOSAL ACTIVITIES AT THE FACILITY YES ___ NO ___ UNKNOWN ___
IF NO, DESCRIBE WHAT AREAS ARE NOT COVERED _____

POTENTIAL SOURCES OF INFORMATION

	USED	NOT USEFUL	NOT AVAILABLE
1) STATE HAZARDOUS/SOLID WASTE FILES	X		
2) STATE WATER FILES			
3) STATE AIR FILES			
4) STATE DEPARTMENT OF HEALTH	X		
5) STATE GEOLOGICAL SURVEY	X		
6) STATE DEPARTMENT OF NATURAL RESOURCES	X		
7) STATE FIRE MARSHALL			
8) COUNTY DEPARTMENT OF HEALTH	X		
9) COUNTY ENGINEER			
10) COUNTY CLERK/RECORDER OF DEEDS			
11) CITY DEPARTMENT OF HEALTH			
12) CITY ENGINEER			
13) CITY FIRE DEPARTMENT/FIRE MARSHALL			
14) CITY WATER/SEWER DEPARTMENT			
15) U.S. SOIL CONSERVATION SERVICE			
16) OTHERS			
17 Minnesota Historical Society	X		
18 Directory of Mn. City Officials (1989)	X		

FIT PREPARER Susan Price DATE 02/08/90

See attached 2070-12 FORM

III WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS	SOURCES
SLU	SLUDGE				
OLW	OILY WASTE				
SOL	SOLVENTS				
PSD	PESTICIDES				
OCC	OTHER ORGANIC CHEMICALS				
IOC	INORGANIC CHEMICALS				
ACD	ACIDS				
BAS	BASES				
MES	HEAVY METALS				

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION	SOURCES

V FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	SOURCES
FDS			FDS			
FDS			FDS			
FDS			FDS			
FDS			FDS			

WASTE CALCULATION PAGE

unknown source and quantity

A) GROUNDWATER CONTAMINATION

A.1 MONITORING WELLS YES ___ NO X UNKNOWN ___ NUMBER OF WELLS ___

A.2 MONITORING WELLS CONTAMINATED YES ___ NO X UNKNOWN ___

A.3 PRIVATE, PUBLIC, AND/OR COMMERCIAL WELLS CONTAMINATED YES X NO ___

A.4 TYPE(S) OF CONTAMINATION perchloroethylene, trichloroethylene, chloroform, dichlorodifluoromethane

A.5 BACKGROUND WELL AVAILABLE YES ___ NO ___ UNKNOWN X

A.6 IF NO RECORDED CONTAMINATION, IS THERE A POTENTIAL YES ___ NO ___
WHY? ___

A.7 GROUNDWATER USED FOR DRINKING WATER YES X NO ___

A.8 DISTANCE TO NEAREST WELL 0 FEET

A.9 ESTIMATE OF THE POPULATION ON GROUNDWATER IN A THREE MILE RADIUS OF THE SITE
6213 4-mile 37,574

A.10 TYPES OF AQUIFERS

TYPE	THICKNESS	DEPTH	AQUIFER OF CONCERN	CONTAMINATED
sorficial	≈ 200	0-200	yes	yes
Prairie du Chien - Jordan	≈ 300+	200-500	yes	unknown

A.11 DOES SITE GEOLOGY PREVENT THE MIGRATION OF CONTAMINANTS TO UNDERLYING AQUIFERS YES ___ NO X UNKNOWN ___ IF YES, WHY ___

A.12 DOES THE CONTAINMENT PROCEDURES UTILIZED AT THE FACILITY PREVENT THE MIGRATION OF CONTAMINANTS TO UNDERLYING AQUIFERS YES ___ NO ___ UNKNOWN X
IF YES, WHY ___

SOURCES: 1, 5, 4, 6, 8, 16, 17, ___, ___, ___, ___

B) SURFACE WATER CONTAMINATION

B.1 TYPE OF NEARBY SURFACE WATER(S):
CREEK X, STREAM ___, AND/OR RIVER X (CONTINUOUSLY FLOWING)
POND ___, LAKE ___, AND/OR SWAMP/MARSH X

B.2 DISTANCE TO THE NEAREST SURFACE WATER ½ ~~FEET~~ mile Kennally Creek

B.3 DOES SURFACE TOPOGRAPHY PREVENT THE MIGRATION OF CONTAMINANTS TO THE SURFACE WATER(S) YES ___ NO X. IF YES, WHY ___

B.4 USAGE OF SURFACE WATER

DRINKING WATER	YES ___	NO X	UNKNOWN ___
IRRIGATION	YES ___	NO X	UNKNOWN ___
RECREATION	YES X	NO ___	UNKNOWN ___

B) SURFACE WATER CONTAMINATION (CONTINUED)
B.5 SURFACE WATER CONTAMINATED YES ____ NO X UNKNOWN ____
B.6 TYPE(S) OF CONTAMINATION AND DATE ____

B.7 IF NO RECORDED CONTAMINATION, IS THERE A POTENTIAL YES X NO ____
WHY? through ground water infiltration

B.8 DISTANCE TO NEAREST DRINKING WATER INTAKE WITHIN THREE MILES: >100 MILE(S)
B.9 ESTIMATE OF POPULATION USING SURFACE WATER 0, INTAKES WITHIN THREE MILES OF THE SITE.
B.10 IS THERE A WILDLIFE PRESERVE (5 ACRE MINIMUM) WHICH COULD BE CONTAMINATED YES X NO ____
B.11 ARE THERE FEDERALLY ENDANGERED SPECIES PRESENT YES X NO ____ UNKNOWN ____

SOURCES: ____, ____, ____, ____, ____, ____, ____, ____, ____, ____, ____

C) CONTAMINATION OF AIR
C.1 CITIZEN COMPLAINTS YES ____ NO X DATE(S) ____ NATURE OF COMPLAINT ____

C.2 AIR PROBLEMS AS CONFIRMED BY LOCAL, STATE, AND/OR FEDERAL INVESTIGATORS YES ____ NO X DATE(S) ____ DESCRIPTION OF EVENT AND METHODOLOGY USED ____

C.3 IF NO CONFIRMED RELEASES, IS THERE A POTENTIAL YES ____ NO X. IF YES, WHY ____

C.4 ESIMATE OF POPULATION WITHIN A FOUR MILE RADIUS 19,000

SOURCES: 1, 6, 8, ____, ____, ____, ____, ____

D) FIRE/EXPLOSIVE CONDITIONS
D.1 HAS A STATE AND/OR LOCAL FIRE MARSHAL CERTIFIED THAT THE SITE IS A FIRE HAZARD OR PRESENTS A EXPLOSION THREAT YES ____ NO X DATE ____
AGENCY ____ DESCRIPTION OF EVENT ____

D.2 INCOMPATIBLE WASTES PRESENT YES ____ NO ____ UNKNOWN X
D.3 IGNITABLE WASTES PRESENT YES ____ NO ____ UNKNOWN X
D.4 IF NO CONFIRMED THREAT, IS THERE A POTENTIAL THREAT YES ____ NO ____
UNKNOWN X NATURE OF THE POTENTIAL THREAT ____

D.5 DISTANCE TO NEAREST POPULATION unknown FEET (source has not been located)
D.6 ESTIMATE OF POPULATION WITHIN TWO MILES 1520
D.7 DISTANCE TO NEAREST BUILDING unknown FEET

SOURCES: 1, 6, 8, ____, ____, ____, ____, ____

E) DIRECT CONTACT

E.1 IS SITE ACCESS RESTRICTED RESTRICTED TO NON-FACILITY PERSONNEL YES ___ NO ___ UNKNOWN X IF YES, METHOD ___

E.2 HAVE AND/OR CAN NON-FACILITY PERSONNEL COME EASILY INTO CONTACT WITH HAZARDOUS MATERIAL AT THE FACILITY YES ___ NO X IF YES, HOW ___

E.3 ARE WASTES PROPERLY CONTAINED AT THE FACILITY YES ___ NO X UNKNOWN ___

E.4 ESTIMATE OF THE NUMBER OF INDIVIDUALS WITH ONE MILE OF THE FACILITY 103

E.5 AS A RESULT OF RECREATIONAL ACTIVITIES, IS DIRECT CONTACT POSSIBLE YES ___ NO ___ UNKNOWN X

SOURCES: 1, ___, ___, ___, ___, ___, ___

F) CONTAMINATION OF SOIL

F.1 ANALYTICAL DATA YES ___ NO X IF YES, DATE AND TYPE OF CONTAMINATION ___

F.2 PHOTOGRAPHIC EVIDENCE TO INDICATE CONTAMINATION YES ___ NO X IF YES, DATE AND DESCRIPTION ___

F.3 IF NO TO F.1 AND F.2, IS THERE A POTENTIAL YES ___ NO ___ UNKNOWN ___ IF YES, DESCRIBE Contamination is inferred based upon observed release to

F.4 AREA AFFECTED OR POTENTIALLY AFFECTED unknown ACRE(S)

SOURCES: 1, 8, ___, ___, ___, ___, ___

G) DRINKING WATER CONTAMINATION

SEE SECTIONS A AND B

G.1 TOTAL POPULATION POTENTIALLY AFFECTED 6213 3-mile radius / 37,574 4-mile radius (NOT DOUBLE COUNTED)

SOURCES: SEE SECTIONS A AND B

H) WORKER EXPOSURE/INJURY

H.1 DO SITE CONDITIONS THREATEN FACILITY WORKER AND/OR WORKERS AT ADJACENT FACILITIES YES ___ NO ___ UNKNOWN X IF YES, DESCRIBE ___

H.2 HAS THERE BEEN DOCUMENTED PROBLEMS YES ___ NO ___ UNKNOWN X IF YES, DESCRIBE ___

H.3 ESTIMATE OF WORKER POPULATION AFFECTED OR POTENTIALLY AFFECTED unknown

SOURCES: 1, 4, ___, ___, ___, ___, ___

I) POPULATION EXPOSURE/INJURY

I.1 DO SITE CONDITIONS THREATEN NEARBY POPULATION YES ____ NO ____ UNKNOWN X
IF YES, DESCRIBE (INCLUDE DATES OF EXPOSURE) ____

I.2 AS A RESULT OF RECREATIONAL ACTIVITIES, IS POPULATION EXPOSURE/INJURY POSSIBLE
YES ____ NO ____ UNKNOWN X IF YES, DESCRIBE ____

I.3 POPULATION AFFECTED OR POTENTIALLY AFFECTED - SAME AS TOTAL POPULATION EXPOSED

SOURCES: 1, 8, ____, ____, ____, ____, ____

J) DAMAGE TO FLORA

J.1 OBSERVED OCCURRENCES OF DAMAGE YES ____ NO X UNKNOWN ____ IF YES, DATE AND ~~EXTENT OF DAMAGE~~ ____

J.2 IF NO OR UNKNOWN IN J.1, IS THERE A POTENTIAL FOR SUCH AN OCCURRENCE YES X
NO ____ UNKNOWN ____ IF YES, DESCRIBE POTENTIAL if contaminated ground water is discharged to the Nicols Meadows Fen

SOURCES: 1, 6, ____, ____, ____, ____, ____

K) DAMAGE TO FAUNA

K.1 OBSERVED OCCURRENCES OF DAMAGE YES ____ NO X UNKNOWN ____ IF YES, DATE AND EXTENT OF DAMAGE ____

K.2 IF NO OR UNKNOWN TO K.1, IS THERE A POTENTIAL FOR SUCH AN OCCURRENCE YES ____
NO ____ UNKNOWN X IF YES, DESCRIBE POTENTIAL ____

SOURCES: 1, 6, ____, ____, ____, ____, ____

L) CONTAMINATION OF FOOD CHAIN

L.1 HAVE GRAIN CROPS BEEN IMPACTED YES ____ NO X UNKNOWN ____
L.2 HAVE LIVESTOCK (CATTLE, CHICKENS, etc.) BEEN IMPACTED YES ____ NO ____
UNKNOWN X
L.3 IF YES TO L.1 AND/OR L.2, DESCRIBE IMPACT AND GIVE DATE ____

L.4 IF NO TO L.1 AND/OR L.2, IS THERE A POTENTIAL YES X NO ____ UNKNOWN ____
IF YES, DESCRIBE Some residents have small number of livestock

SOURCES: 1, 8, ____, ____, ____, ____, ____

M) UNSTABLE CONTAINMENT OF WASTES

M.1 ARE WASTE STORAGE AND/OR DISPOSAL PRACTICES AT THE FACILITY ADEQUATE YES ____ NO ____ UNKNOWN X IF NO, DESCRIBE NATURE OF THE PROBLEM(S) _____

M.2 IF YES OR UNKNOWN TO M.1, DESCRIBE ANY POTENTIAL PROBLEM(S) assume unstable storage of waste due to observed release to the ground water.

SEE ALL PREVIOUS SECTIONS, USE MAXIMUM POPULATION THAT IS NOT DOUBLE COUNTED

SOURCES: 1, 8, ____, ____, ____, ____, ____

N) DAMAGE TO OFFSITE PROPERTY

N.1 HAVE OFFSITE PROPERTIES BEEN DAMAGED BY SITE ACTIVITES YES ____ NO ____ UNKNOWN X IF YES, GIVE DATE(S) AND DESCRIBE EVENT(S) _____

SEE ALL PREVIOUS SECTIONS

SOURCES: 1, 8, ____, ____, ____, ____, ____

O) CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs

O.1 DOCUMENTED DAMAGE TO INFRASTRUCTURE YES ____ NO X UNKNOWN ____ IF YES, GIVE DATE(S) AND DESCRIBE EVENT(S) _____

O.2 IF NO OR UNKNOWN TO O.1, DESCRIBE ANY POTENTIAL PROBLEMS ground water pumpout system at Seneca waste water treatment plant may be impacted

SOURCES: 1, ____, ____, ____, ____, ____, ____

P) ILLEGAL/UNAUTHORIZED DUMPING

P.1 HAVE THERE BEEN EPISODES OF ILLEGAL, UNAUTHORIZED, AND/OR MIDNIGHT DUMPING AT THE FACILITY YES ____ NO ____ UNKNOWN X IF YES, GIVE DATE(S) AND DESCRIBE EVENT(S) _____

P.2 HAS THE FACILITY RECEIVED HAZARDOUS WASTES WITHOUT A PROPER LOCAL, STATE, AND/OR FEDERAL PERMITS WHEN SUCH PERMITS WOULD HAVE NORMALLY BEEN REQUIRED YES ____ NO ____ UNKNOWN X IF YES, GIVE DATE(S) AND DESCRIBE EVENT(S) _____

P.3 WOULD SITE SITE SECURITY PROMOTE UNAUTHORIZED DUMPING YES ____ NO ____ UNKNOWN X IF POSSIBLE, DESCRIBE _____

SOURCES: 1, 8, ____, ____, ____, ____, ____

RECOMMENDED ACTIONS Recommend further sampling of residential wells with the installation of a monitoring well network to locate source(s)

COMMENTS residents with drinking water wells have been connected to the Eagan city water/sewer systems through an emergency response action administered by the Minnesota Pollution Control Agency.

PA DOCUMENTATION SHEET

SITE Nichols Ground Water Contamination
IDENTIFICATION NUMBER _____

SOURCE NUMBER	DESCRIPTION OF SOURCE
1A, 1B, 1C, 1D	1A) QUAD NAME St. Paul SW SIZE: (7.5) or 15 YEAR 1980 1B) QUAD NAME Bloomington SIZE: (7.5) or 15 YEAR 1980 1C) QUAD NAME _____ SIZE: 7.5 or 15 YEAR _____ 1D) QUAD NAME _____ SIZE: 7.5 or 15 YEAR _____

PA DOCUMENTATION SHEET

SITE Nichols Ground Water Contamination
IDENTIFICATION NUMBER _____

SOURCE NUMBER	DESCRIPTION OF SOURCE

PA DOCUMENTATION SHEET

SITE Nichols Ground Water Contamination
IDENTIFICATION NUMBER _____

SOURCE NUMBER	DESCRIPTION OF SOURCE

PA DOCUMENTATION SHEET

SITE Nichols Ground water Contamination
IDENTIFICATION NUMBER

SOURCE NUMBER	DESCRIPTION OF SOURCE

SCREENING SITE INSPECTION REPORT
FOR

NICHOLS' GROUND WATER CONTAMINATION
EAGAN, MINNESOTA

U.S. EPA ID: MND985681246

Prepared by: Gary L. Krueger (signature) — Date: 9/23/92
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Senior Pollution Control Specialist
Site Assessment Unit
Program Development Section
Ground Water and Solid Waste Division
Minnesota Pollution Control Agency

Michael J. Loughran (signature) — Date: 9-23-92
Michael Loughran
Hydrologist
Site Assessment Unit
Program Development Section
Ground Water and Solid Waste Division
Minnesota Pollution Control Agency

Reviewed by: R. Swenson (signature) — Date: 9-25-92
Ronald R. Swenson
Supervisor, Site Assessment Unit
Program Development Section
Ground Water and Solid Waste Division
Minnesota Pollution Control Agency

Approved by: R. Swenson for (signature) — Date: 9-25-92
John N. Holck
Manager, Program Development Section
Ground Water and Solid Waste Division
Minnesota Pollution Control Agency

dlose

6307
Eagan

NICHOLS GROUND WATER CONTAMINATION SITE
SCREENING SITE INSPECTION REPORT
TABLE OF CONTENTS

SCREENING SITE INSPECTION REPORT

Nichols' Ground Water Contamination Site
Eagan, Minnesota

1.0 SUMMARY

The Nichols' Ground Water Contamination site (Site) is located in the city of Eagan, Dakota County, in the area of the intersection of State Highway 13 and Cedar Avenue. In 1988, residential drinking water wells were found to be contaminated with volatile organic compounds (VOC) such as perchloroethylene (PCE). Levels of VOC contamination in some of the wells did exceed both Minnesota Department of Health's Recommended Allowable Limits and Federal Maximum Contaminant Levels (MCL) for drinking water.

In 1990, the Dakota County Public Health Department (Dakota County) began the Contaminant Assessment Team (CAT) program to investigate potential abandoned hazardous waste sites. This Site was one of the sites which Dakota County began a CAT investigation in an attempt to determine a possible source of ground water contamination. With the assistance of Minnesota Pollution Control Agency (MPCA) Site Assessment Unit staff, Dakota County developed a work plan which included sampling of area residential wells, commercial wells, and monitoring wells. Sampling conducted by Dakota County was done in October 1990 and did indicate continued VOC contamination.

The primary focus of this Screening Site Inspection (SSI) Report is to summarize the history of the Site, work done by Dakota County, to determine an initial Hazard Ranking System (HRS) score for the Site and assess the Site's potential for inclusion on the National Piorities List.

2.0 SITE DESCRIPTION

2.1 Site Location

The Site is located in the city of Eagan, Dakota County, in the area of the intersection of State Highway 13 and Cedar Avenue (See Figure 1). The area is primarily residential with some commercial businesses. This residential

NICHOLS GROUND WATER CONTAMINATION

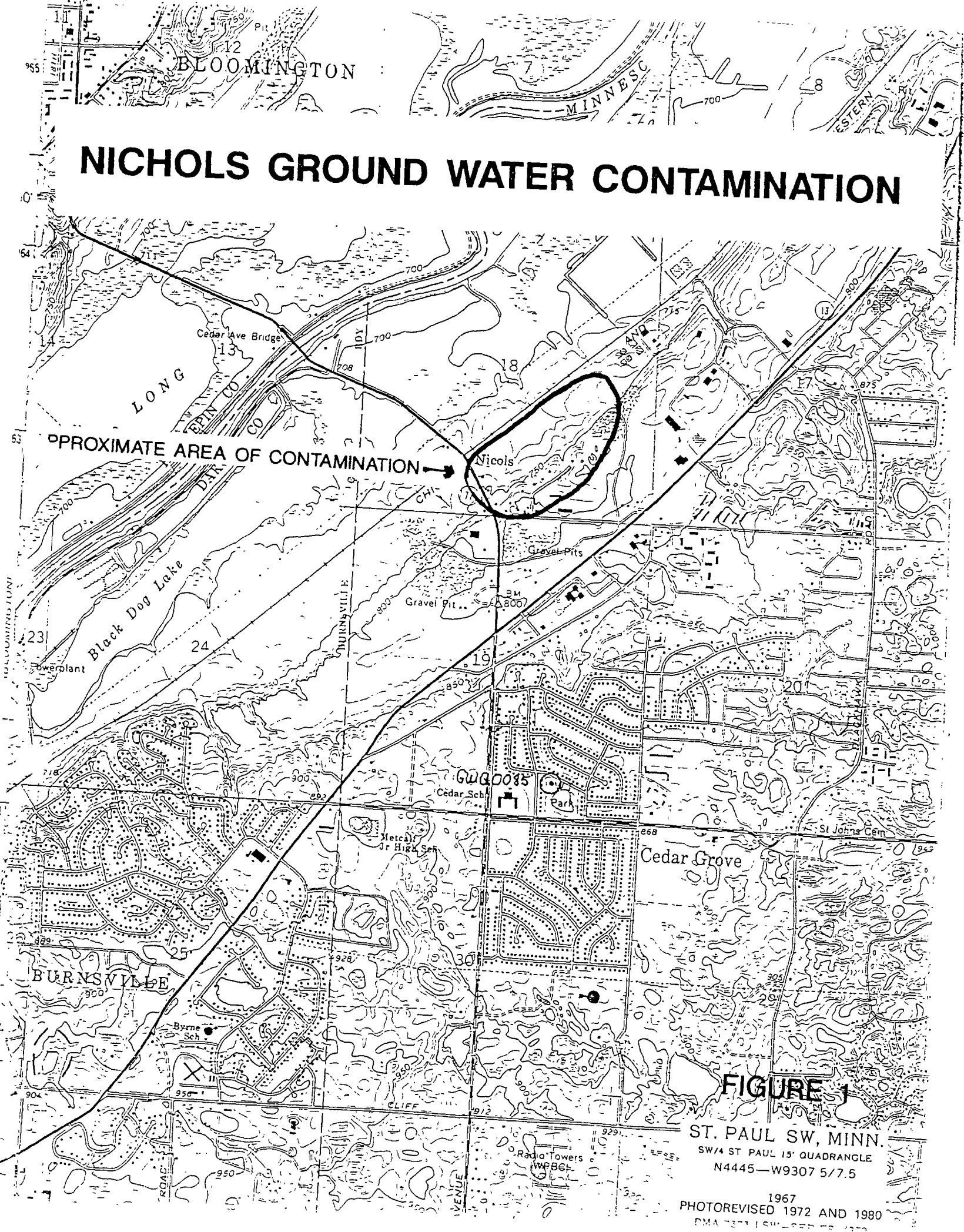

FIGURE 1

ST. PAUL SW, MINN.

SW/4 ST PAUL 15' QUADRANGLE

N4445—W9307 5/7.5

1967

PHOTOREVISED 1972 AND 1980

neighborhood of Eagan is also referred to as Wuthering Heights. The Site is also adjacent to the Minnesota River, the Minnesota National Wildlife Refuge, and the Nichols' Meadow Fen (Fen). This calcareous Fen is state desiganted as an outstanding resource value.

2.2 Site History

In March 1989, residents in this area of Eagan had become concerned about the quality of drinking water from their private wells and relayed those concerns to Dakota County. This concern had primarily risen from the fact that the Metropolitan Waste Control Commission (MWCC) was expanding a nearby sewage treatment plant and de-watering activities had lowered the water table. The de-watering also affected flow of ground water into the Nichols' Fen and the quantity of water available to the private wells.

Dakota County did sample the nine residential wells reported to be affected by de-watering activities and found VOC contamination in seven of the wells tested. Subsequent sampling done by MWCC and MPCA confirmed ground water contamination by VOCs. Since contamination was detected in several private wells and de-watering activities affected quantity of ground water available to the residents, MWCC connected the residents to the city of Eagan municipal drinking water supply in 1989. The private wells are now used primarily for lawn watering.

In May 1990, Dakota County established a program to assess potential hazardous waste sites in the county. Dakota County staff established the Contaminant Assessment Team (CAT) program and requested the assistance of MPCA Site Assessment staff in developing the CAT program. One of the sites the CAT program was interested in investigating was this Site. Dakota County was concerned that the source on VOC contamination had not been determined and that contaminated ground water could impact the Nichols' Fen, which supports endangered species of flora.

3.0 SAMPLING ACTIVITIES

3.1 Sample Locations

Dakota County staff reviewed available information regarding the Site and prepared a work plan for planned sampling activities. The work plan was submitted to MPCA Site Assessment staff for review and comment. Sampling consisted of re-sampling the nine residential wells, two wells at area businesses, and eight monitoring wells (See Table 1 and Figure 2). Dakota County's plans were to sample all wells in one round of sampling to try to delineate a contaminant plume and/or identify a source of contamination. Sources of contamination were suspected to be either an area commercial facility or an abandoned gravel quarry. Ground water sampling was conducted by Dakota County in September and October 1990.

Ground water samples collected from the wells were analyzed by PACE Laboratories of Minneapolis. Although PACE was not in the U.S. Environmental Protection Agency's (EPA) Contract Lab Program (CLP) at the time of Dakota County's investigation, the samples were taken and analyzed under CLP procedures. Sample collection was done with the advice of the MPCA to facilitate usable data for HRS scoring purposes. All samples were analyzed for Target Compound List (organic) compounds and Target Analyte List (inorganic) analytes.

One of the residential wells continued to indicate elevated levels of PCE of up to 63 µg/l. Follow-up sampling by Dakota County done in May 1991 confirmed the continued contamination of this residential well with PCE. This residence has been connected to the city of Eagan municipal drinking water supply. Semiannual sampling at this residence by Dakota County since October 1990, has indicated a decline in levels of PCE contamination. The other residential wells sampled by Dakota County in September and October 1990 did not indicate contamination from PCE.

Tetrahydrofuran was also detected in three of the monitoring wells, but these wells were constructed with PVC piping which have glued joints that could affect sample results. Inorganic constituents detected above secondary MCLs were found in monitoring wells.

NICOLS ROAD CAT - SUMMARY OF SITE PLAN

NAME LOCATION	MAP NO.	SAMPLE TIME	WELL TYPE	SAMPLE METHOD	WELL DEPTH	INDIVIDUAL PARAMETER	465 C	TARGET METALS	GCMS	PESTICIDES
1. FEN #1	18	10/16/90	Monitoring Well	Bale	74 feet	Yes	Yes	Yes	No	No
2. FEN #3	19	10/16/90	Monitoring Well	Bale	74 feet	Yes	Yes	Yes	No	No
3. MWCC #7A	20	10/16/90	Monitoring Well	Bale	27 feet	Yes	Yes	Yes	No	No
4. MWCC #8A	21	10/16/90	Monitoring Well	Bale	42 feet	Yes	Yes	Yes	No	No
5. MWCC #9A	22	10/16/90	Monitoring Well	Bale	43 feet	Yes	Yes	Yes	No	No
Non-Responsive		10/16/90	Residential Well	Tap (North (Side House)	100 + feet	Yes	Yes	Yes	No	No
		10/16/90	Residential Well	Tap	160 feet	Yes	Yes	Yes	No	No
		10/16/90	Residential Well	Tap (West or East House)	80 feet	Yes	Yes	Yes	Yes	Yes
9. Brad Ragan Tire Company	13	10/16/90	Commercial Well	Tap		Yes	Yes	Yes	No	No
Non-Responsive		10/16/90	Residential Well	Tap (Outside)	200 feet	Yes	Yes	Yes	No	No
		10/16/90	Residential Well	Tap (Basement)		Yes	Yes	Yes	No	No
		10/17/90	Residential Well	Tap	120 feet	Yes	Yes	Yes	No	No
13. Instant Test 4000 Beau-d-Rue	1	10/17/90	Commercial Well	Tap	100 + feet	Yes	Yes	Yes	No	No
Non-Responsive		10/17/90	Residential Well	Tap	100 + feet	Yes	Yes	Yes	No	No
		10/17/90	Residential Well	Tap	----	Yes	Yes	Yes	Yes	Yes
		10/17/90	Residential Well	Outside Tap Back of House by Porch		Yes	Yes	Yes	Yes	Yes
17. USGS	15	9/24-25/90	Monitoring Well	Bale	35.75 feet	Yes	Yes	Yes	No	No
18. USGS	16	9/24-25/90	Monitoring Well	Pump	13.45 feet	Yes	Yes	Yes	No	No
19. USGS	17	9/25/90	Monitoring Well	Pump	6.72 feet	Yes	Yes	Yes	No	No

WQM:CAT-Chart

TABLE 1

From Dakota County CAT Report

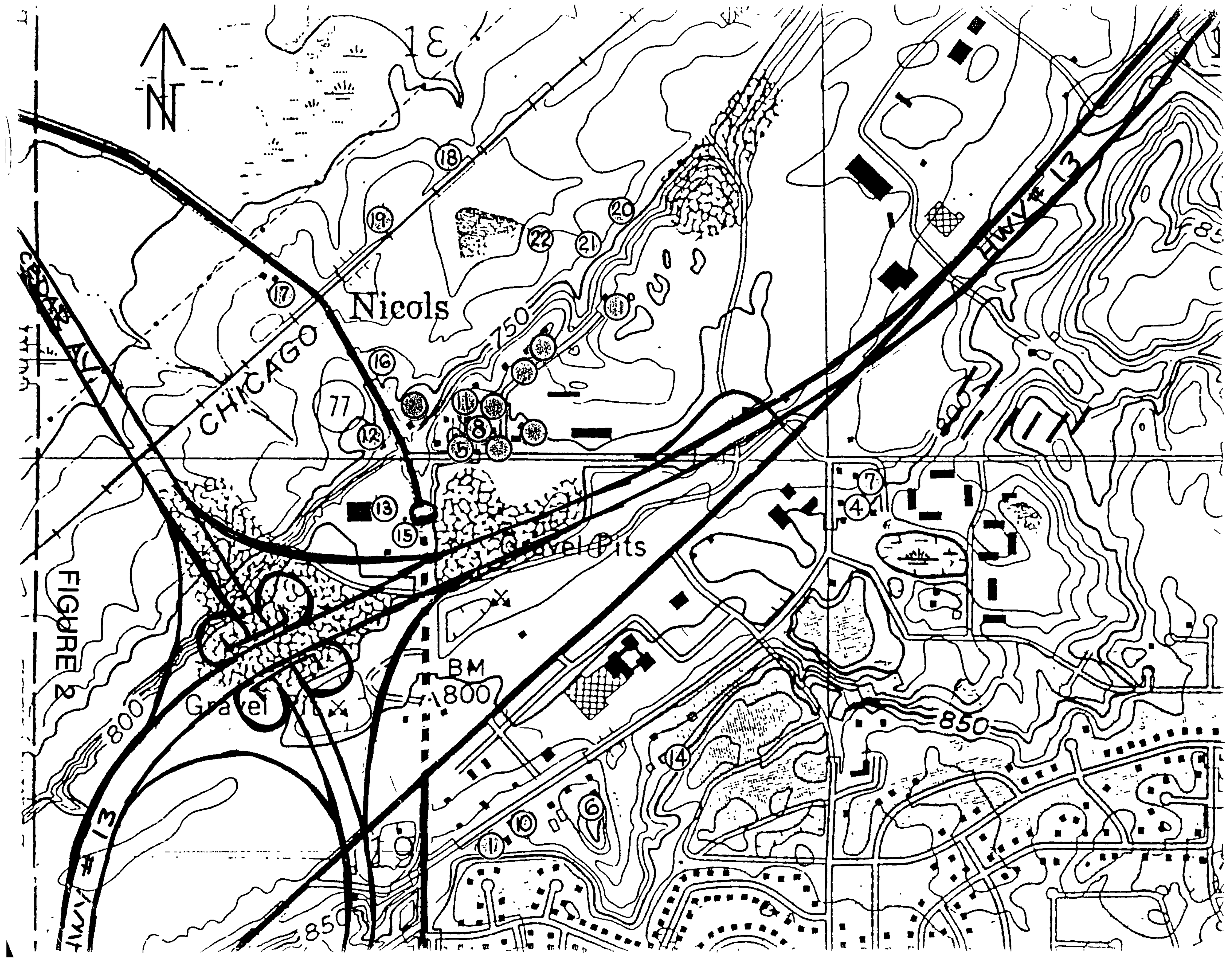
N
Nicols
CHICAGO
HWY #13
Gravel Pits
Gravel Pit
BM
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FIGURE 2

Contaminants such as trichloroethylene, methylene chloride, chloroform, and dichlorodifluoromethane detected in residential wells in 1989, were not detected in residential wells during sampling by Dakota County in 1990.

Appendix A is a summary report of sampling activities done by Dakota County. Appendix B is laboratory data sheets for each of the wells sampled. Appendix C is the preliminary assessment done by MPCA in March 1990 which includes a summary of past sample results.

4.0 PATHWAYS OF CONCERN

4.1 Ground Water

There has been a documented release of hazardous substances at the Site. Ground water monitoring done since 1989 has indicated contamination by VOCs, notably PCE. The source of PCE contamination; however, has not been identified.

Surficial ground water in this area is not known to be presently used for drinking purposes. Residences whose wells were affected by contamination were first supplied with bottled water by the MPCA and then connected to the municipal drinking water system by MWCC.

A deeper Prairie du Chien/Jordan bedrock aquifer is used for municipal drinking water supply wells by the cities of Burnsville and Eagan. Eagan has 15 active Prairie du Chien/Jordan municipal wells which serve approximately 42,000 people. Five of the wells are located approximately one to two miles from the Site, seven wells are approximately two to three miles from the Site, and three wells are approximately three to four miles from the Site. There are an additional two stand-by Prairie du Chien/Jordan municipal wells approximately one mile from the Site.

Burnsville's 11 Prairie du Chien/Jordan municipal wells, which serve approximately 40,000 people, are within three to four miles of the Nichols area.
Both Eagan and Burnsville have municipal supply wells which draw water from the Mt. Simon and Hinckley formations. The Mt. Simon and Hinckley formations, which

lie 400 to 500 feet below the Prairie du Chien/Jordan formation, are not considered to be interconnected to the Prairie du Chien/Jordan formation for HRS scoring purposes. Surficial and Prairie du Chien/Jordan bedrock aquifers are considered to be interconnected for HRS scoring purposes, and together are defined as be the aquifer of concern. The Prairie du Chien/Jordan municipal were not sampled as part of this investigation based on distance from Site and ground water flow gradients.

4.2 Surface Water

Upper aquifer ground water in the area discharges to the Minnesota River. This was a major concern when contamination was first detected and de-watering activities began. The Nichols' Fen is located adjacent to the Site and there was concern about contaminated ground water affecting endangered plant species in the Fen. In addition, de-watering activities appeared to lower the water table in the Fen, which could also adversely impact the Fen.

Through mediation efforts, MWCC installed injection wells along the Fen to offset de-watering effects. Monitoring wells located along the Fen, were used to monitor ground water levels and contamination. Samples collected by Dakota County from the monitoring wells did not indicate PCE contamination.

Expansion of the nearby wastewater treatment plant by MWCC has been completed, with de-watering and ground water injection activities decreased or discontinued. Recommendations from the mediation efforts regarding the treatment plant expansion are included in Appendix D.

Also located downstream from a probable point of entry of ground water discharge is the Minnesota National Wildlife Refuge, the Minnesota River, and the Mississippi River. Both the Minnesota and Mississippi Rivers are used for recreational purposes.

4.3 Soil and Air

Since this Site is a ground water plume site and potential source of contamination has not been identified, the soil and air pathways have not been addressed at this time.

5.0 CONCLUSIONS

There has been a documented release of VOCs to ground water at the Site. Ground water sampling done by Dakota County has indicated a decrease in contaminant levels in private wells. Sampling activities were not able to delineate a ground water contaminant plume or identify a potential source of contamination. Residences whose wells were found to be contaminated have been connected to the city of Eagan municipal drinking water supply. De-watering activities have been discontinued which allows a natural flow of ground water to the Nichols' Fen.

Dakota County will continue to be the lead agency for the Site and will submit future sample results to the MPCA. Dakota County plans to monitor the one residence whose well has exhibited elevated levels of PCE and neighboring private wells to assess continued ground water contamination in the area. MPCA Site Assessment staff recommends continued sampling of monitoring wells near the Fen to assist in determining potential impacts from ground water discharge to the Fen. Additional MPCA investigative work to identify a source of contamination may be considered, based on monitoring results.

6.0 REFERENCES

- Final Report for Nichols Road CAT Project, Dakota County Public Health Department, February 1992.

- MPCA Preliminary Assessment for Nichols' Ground Water Contamination Site, done by Susan Price, March 1990.

- Recommendations of the Seneca Wastewater Treatment Plant Mediation Roundtable.

- Dakota County Sample Results for Follow-Up Samples of Ramerine Well and Notes from Seneca Wastewater Treatment Plant Mediation Meetings Supplied by David Swenson, Dakota County Public Health.

- MPCA Site Assessment Files, Memo to File: Discussion between Gary Krueger, Site Assessment and Nile Fellows, Site Response Section.

- MPCA Site Assessment Screening Site Inspection Report for the Old Freeway Site.

APPENDIX A

FINAL REPORT FOR NICOLS ROAD CAT PROJECT
Submitted to MPCA
February, 1992

Summary

In late September and October 1990, nineteen wells were sampled in the Nicols Road area for 80 parameters by Pace Laboratories using EPA approved methods. Of the 19 wells, eight are monitoring wells, 2 are commercial wells and 9 are residential wells. They ranged in depth from 6.7 feet to 200 feet. Three of the nineteen wells were analyzed for an extended list of parameters. A detailed Quality Assurance (QA) plan was developed by PACE Laboratory and was approved by the Minnesota Pollution Control Agency (MPCA) prior to sampling. Dakota County staff supervised the sampling and was available for consultation if and when problems arose.

Five of the wells sampled had detectable levels of organic compounds. One upgradient well had 20 ppb 1,1,1 trichloroethane. Given that the business on this site uses trichloroethane in their laboratory, this is believed to be the source of the contamination. Of the remaining wells with contamination, three had tetrahydrofuran concentrations between 16 and 130 ppb, and the other had 63 ppb 1,1,2,2-tetrachloroethyene. One other well showed 6 ppb Di-n-octyl phthalate, which was below the detection limit. Several inorganic substances were also detected above secondary MCL (maximum contaminant level), none of which are believed to have health risks. Eleven (11) wells exceeded the RAL (recommended allowable limit established by the Minnesota Department of Health) for manganese.

Background

In April and June of 1989, well sampling was conducted by Dakota County and PACE Laboratories in the Wuthering Heights neighborhood of Eagan (See attached map). Water quality analyses were performed by Minnesota Valley Testing Laboratories (MVTL) and Pace Laboratory respectively. These tests showed several of the residential wells to be contaminated with organic compounds. In early 1990, a contamination assessment team (CAT) was formed to determine the source of contamination found in the residential wells.

The Dakota County CAT members for this site are Jon Springsted, Laura Newcombe and David Swenson. The purpose of this site investigation was to gather information about groundwater contamination. To ensure that proper protocol was followed, the MPCA was consulted to determine what information was needed and in what form it had to be gathered. From this, a sampling plan and a

list of sampling parameters was developed. PACE, the only EPA certified laboratory in the area, was chosen to collect the water samples and perform the analyses.

Discussion

Inorganic Results - The results of the analyses for inorganic parameters suggest variations between residential and monitoring wells, however, none of the wells tested revealed water quality to be an immediate concern to the public health. The EPA standards for public system drinking water (MCL's) were exceeded in five instances excluding manganese. All of these high levels were detected in monitoring wells. In these instances, the standards exceeded were secondary, meaning they were established for reasons other than health concerns. Manganese exceeded the RAL in 11 wells, it is not known if this represents a health hazard in this instance.

Organic Results - Four (4) organic compounds were detected by the sampling program. Three detections were in monitoring wells for the same parameter; tetrahydrofuran. Tetrahydrofuran is a constituant of a glue compound commonly used in PVC pipe joints such as those found in monitoring wells. 1,1,1-Trichloroethane was detected a quantity below the RAL for drinking water contaminants. This chemical was found in Instant Test's well where it is used in laboratory procedures. Di-n-Octyl phtalate was detected in the extended parameter scan at 6 ppb, this value was only an estimate as it was below the minimum detection limit. A duplicate sample did not detect this compound. The significance of this detection is not known. The Non- well exhibited 1,1,2,2-tetrachloroethene (PERC) at a level of 63 ppb. This exceeds the RAL of 7.0ppb by approximately 10 times. This chemical is commonly used in dry cleaning and as a degreasing solvent although the latter use has declined in recent years. The Non- well has previously been found to be contaminated with PERC.

Contamination Plume - The results of this sampling program did little to delineate a contamination plume. The only significant results are centered at the Non- well. Based on earlier samplings, it is possible the plume may have been deflected, diminished, released intermittantly, or been affected by a fluctuating water table. The present sampling program and resulting information have not established the cause or location of the original contamination.

Public Health Issues - Only one well Non- had contaminant levels high enough to merit health concerns due to long term exposure. The water from this well should not be consumed according to MDH and Dakota County guidelines. Also, it is possible that using this water for hygeine may represent a health risk. It is not known whether contamination at this level can affect vegetation.

All residences sampled were hooked up to the City of Eagan water supply in 1989 and home owners stated they did not use the well water for any use other than watering their lawns or gardens. Based on these observations, the risk to public health caused by contamination of the upper aquifer in the Nicols road area is minimal. Upper aquifer groundwater in the Nicols road area discharges to the Minnesota River.

Residents - Several residents have been concerned about contamination of their well water since the first detection of contamination in 1989. The impact from the MWCC dewatering project further strengthened this concern. The CAT did sense, however, that most residents were satisfied with their city hook-ups and were now less concerned about the potential contamination. The results of the latest sampling program, while not conclusive, did demonstrate a reduction in contamination of these wells.

Non-Responsive

[redacted]

Jon Springsted
Environmental Specialist
Solid Waste Management

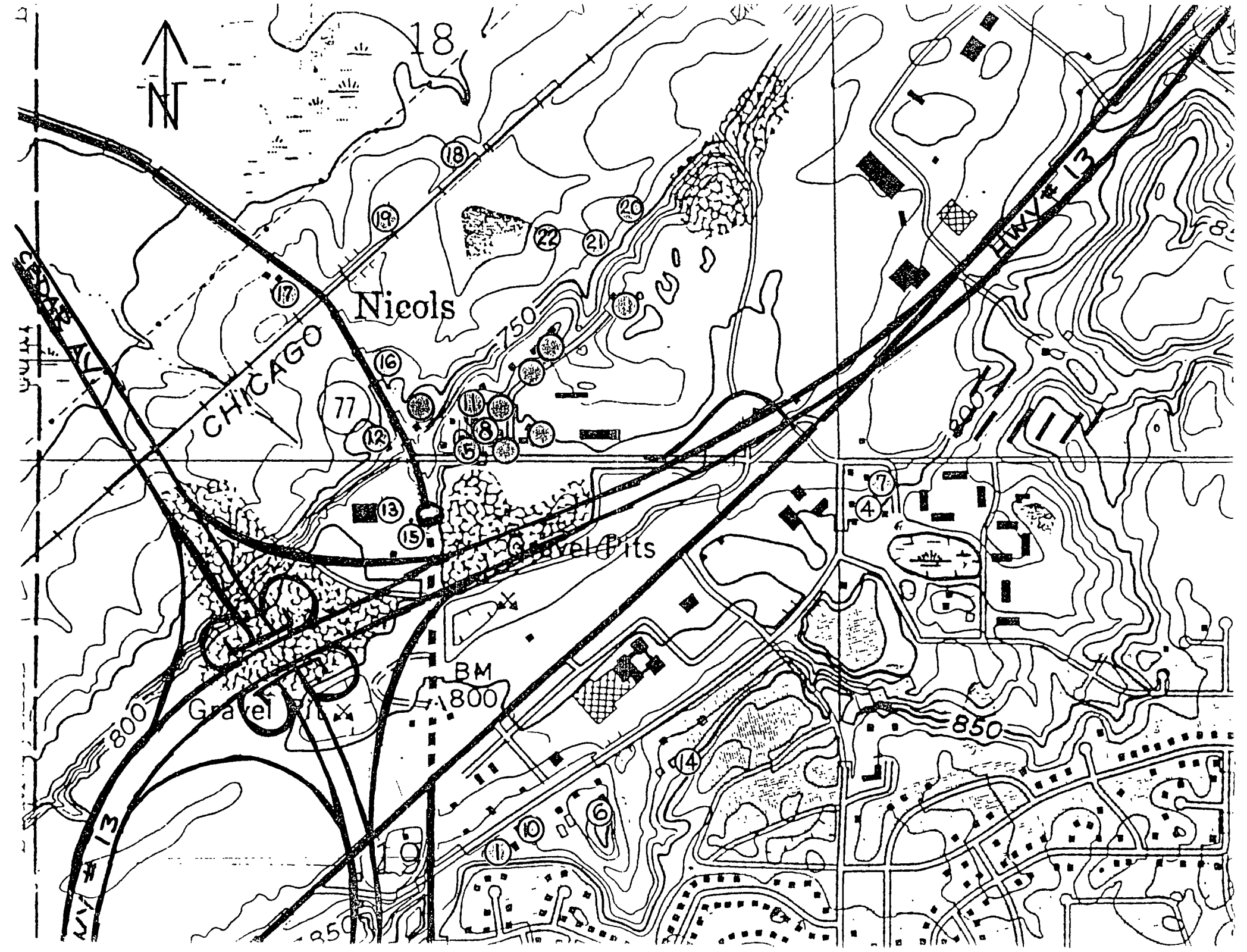
Laura Newcombe
Environmental Specialist
Hazardous Waste Management

David Swenson
Environmental Specialist
Water and Land Management

NICOLS ROAD CAT - SUMMARY OF SITE PLAN

NAME LOCATION	MAP NO.	SAMPLE TIME	WELL TYPE	SAMPLE METHOD	WELL DEPTH	INDIVIDUAL PARAMETER	465 C	TARGET METALS	GCMS	PESTICIDES
1. FEN #1	18	10/16/90	Monitoring Well	Bale	74 feet	Yes	Yes	Yes	No	No
2. FEN #3	19	10/16/90	Monitoring Well	Bale	74 feet	Yes	Yes	Yes	No	No
3. MWCC #7A	20	10/16/90	Monitoring Well	Bale	27 feet	Yes	Yes	Yes	No	No
4. MWCC #8A	21	10/16/90	Monitoring Well	Bale	42 feet	Yes	Yes	Yes	No	No
5. MWCC #9A	22	10/16/90	Monitoring Well	Bale	43 feet	Yes	Yes	Yes	No	No
Non-Responsive		10/16/90	Residential Well	Tap (North (Side House)	100 + feet	Yes	Yes	Yes	No	No
		10/16/90	Residential Well	Tap	160 feet	Yes	Yes	Yes	No	No
		10/16/90	Residential Well	Tap (West or East House)	80 feet	Yes	Yes	Yes	Yes	Yes
9. Brad Ragan Tire Company	13	10/16/90	Commercial Well	Tap		Yes	Yes	Yes	No	No
Non-Responsive		10/16/90	Residential Well	Tap (Outside)	200 feet	Yes	Yes	Yes	No	No
		10/16/90	Residential Well	Tap (Basement)		Yes	Yes	Yes	No	No
		10/17/90	Residential Well	Tap	120 feet	Yes	Yes	Yes	No	No
13. Instant Test 4000 Beau-d-Rue	1	10/17/90	Commercial Well	Tap	100 + feet	Yes	Yes	Yes	No	No
Non-Responsive		10/17/90	Residential Well	Tap	100 + feet	Yes	Yes	Yes	No	No
		10/17/90	Residential Well	Tap	----	Yes	Yes	Yes	Yes	Yes
		10/17/90	Residential Well	Outside Tap Back of House by Porch		Yes	Yes	Yes	Yes	Yes
17. USGS	15	9/24-25/90	Monitoring Well	Bale	35.75 feet	Yes	Yes	Yes	No	No
18. USGS	16	9/24-25/90	Monitoring Well	Pump	13.45 feet	Yes	Yes	Yes	No	No
19. USGS	17	9/25/90	Monitoring Well	Pump	6.72 feet	Yes	Yes	Yes	No	No

WQM:CAT-Chart


N
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Nicols
CHICAGO
CEDAR AV.
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RESULTS SUMMARY

TABLE 1

Organics Analyses	Detection (µg/L)	RAL (µg/L)	Well
Tetrahydrofuran	130(a)	100	USGS #17
	16		USGS #16
	35		Fen #3
1,1,1 Trichloroethane	20	600.0	Instant Test
Di-n-Octyl phthalate	6		Non-Responsive [redacted]
Tetrachloroethyene	63(a)	7.0	
	45(a)		

TABLE 2

Organic Carbon	Detection Range (mg/L)
Dissolved Organic Carbon	ND-35
Total Organic Carbon	ND-20

TABLE 3

Inorganic Analyses	Detection Range	RAL(mg/L)	MCL(mg/l)	No. Wells exceeding RAL
Alkalinity, Bicarborate	260-390			
Arsenic	ND-.004 (a)	.0002	.050	6
Cadmium	ND-.0009	.004	.010	
Chemical Oxygen Demand, Low Level	ND-19			
Chloride	1-92		250*	
Cyanide, Total	ND	.100		
Lead	ND-.002	.020	.050	
Mercury	ND	.001		
Nitrate plus Nitrite Nitrogen	ND-6.1	10(b)	10(b)	
Phenol	ND-.001	4.0		
Phosphorus, Total	ND-19			
Selenium	ND	.010	.010	
Solids Total Disolved Solids	260-1400 (c)		500*	
Total Suspended	ND-72(c)		5*	
Specific Conductivity	510-1800 (c)		810*	
Sulfate	8-100		250*	
Thallium	ND	.0003		

Hazardous Substance List Metals	Detection Range	RAL(mg/L)	MCL(mg/l)	No. Wells exceeding RAL(d)
Aluminum	ND-.017			
Barium	.050-.410	2.0	1.0	
Beryllium	ND	.00008		
Calcium	59-260			
Chromium (Total)	ND	.100	.050	
Cobalt	ND	.001		
Cooper	ND-.031	1.0	1.0*	
Iron	ND-4.6(c)		.3*	
Magnesium	26.4-78.0			
Manganese	.004-2.0(a,c)	.3	.05*	11
Nickel	ND-.025	.070		
Potassium	1.8-6.7			
Antimony	ND-.040 (a)	.001		2
Silver	ND		.050	
Sodium	3.2-99(c)		20*	
Vanadium	ND	.020		
Zinc	ND-2.8(a)	.700	5*	1

* Secondary MCL
ND Not Detected

(a) Exceeds RAL (MDH - Release No. 3, January 1991)
(b) RAL, MCL for Nitrate is 10 mg/l, RAL for Nitrite is 1 mg/l. This analyses does not differentiate between the two.
(c) Exceeds Secondary MCL

SWM:RESULTS

APPENDIX B

Residential Wells

APPENDIX C

Minnesota Pollution Control Agency
520 Lafayette Road, Saint Paul, Minnesota 55155
Telephone (612) 296-6300

Celebrate MINNESOTA 1990

EXECUTIVE SUMMARY
Nichols Ground Water Contamination
March 6, 1990

Situation

In April, 1988 and July, 1989 volatile organic aromatic (VOA) compounds were detected in seven residential wells in the area of Highway 13 and Cedar Avenue in Eagan, Minnesota. The contaminants included perchloroethylene, trichloroethylene, chloroform, and dichlorodifluoromethane (freon). Perchloroethylene was the only contaminant that exceeded the Minnesota Department of Health (MDH) Recommended Allowable Limit of 6.6 ppb for drinking water. The Minnesota Pollution Control Agency (MPCA) declared an emergency situation and authorized the use of Minnesota Environmental Response Liability Act funds to provide bottled water to the affected residents. In addition to the presence of contaminants, a dewatering project at the nearby Metropolitan Waste Control Commission (MWCC) Seneca Waste Water Treatment Plant had drawn surficial water levels down to a point at which the residents could no longer obtain substantial water from their wells. In response to this dewatering effect, MWCC established permanent water service to the Eagan municipal water system. These hook-ups also served to remove the threat of contaminant consumption by the residents.

Based upon ground water collected it appears the contaminants are originating from a source(s) near Highway 13 and Cedar Avenue. Preliminary record searches and interviews with residents by both MPCA and Dakota County Health Department staff have failed to provide any substantial information concerning the origin of the contaminants. There are several municipal well systems (Cedar Grove, Burnsville, and Eagan) within a 3 and 4 mile radius of the area designated as the Site. However, it is unknown if contaminants have affected these municipal systems. It is unlikely the municipal well systems are or may be effected as they are located upgradient of the suspected source area.

The Nichols Meadow Fen (fen) is located downgradient of the Site and supports several endangered species of flora. Should contaminants reach the fen via ground water discharge these species may be affected. Ground water flow to the fen has been interrupted by the dewatering, therefore, an injection well system has been proposed to aid in restoration of natural ground water flow.

Non-Responsive

[redacted]

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MN	

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Nichols Ground Water Contamination	Hwy 13 and Cedar Avenue

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Eagan	MN	55122	Dakota	037	3

09 COORDINATES LATITUDE	LONGITUDE
44 48 45.1	93 13 30.7

10 DIRECTIONS TO SITE (Starting from nearest public road)

intersection of Highway 77 (Cedar Avenue) and Highway 13, exact source unknown

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
unknown	

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
			( )

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Unknown	

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

13 TYPE OF OWNERSHIP (Check one)

☐ A. PRIVATE ☐ B. FEDERAL _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER _____ (Specify) ☒ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED ___/___/___ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☒ YES DATE 4 / 10 / 89 (MONTH DAY YEAR) residential well sampling

☐ NO

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR

☒ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER _____ (Specify)

CONTRACTOR NAME(S) _____

02 SITE STATUS (Check one)	03 YEARS OF OPERATION
☐ A. ACTIVE ☐ B. INACTIVE ☒ C. UNKNOWN	BEGINNING YEAR _____ ENDING YEAR _____ ☒ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

perchloroethylene, trichloroethylene, chloroform, and dichlorodifluoromethane have been detected in residential wells

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

emergency action was taken to establish city water service to residents with affected wells. Nicols Meadow Fen may be impacted through ground water

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed; complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Ron Swenson	MPCA	(612) 297-1793

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Susan Price	MPCA	GWSW/PD	(612) 297-1784	02/08/90 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A SOLID
- ☐ B POWDER FINES
- ☒ C SLUDGE
- ☐ D OTHER (Specify)
- ☐ E SLURRY
- ☒ F LIQUID
- ☐ G GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: unknown
- CUBIC YARDS:
- NO OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A TOXIC
- ☐ B CORROSIVE
- ☐ C RADIOACTIVE
- ☒ D PERSISTENT
- ☐ E SOLUBLE
- ☐ F INFECTIOUS
- ☐ G FLAMMABLE
- ☐ H IGNITABLE
- ☐ I HIGHLY VOLATILE
- ☐ J EXPLOSIVE
- ☐ K REACTIVE
- ☐ L INCOMPATIBLE
- ☐ M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	unknown		
PSO	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

residential well samples 7/20/89

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	perchloroethylene		unknown	290	ppb
	chloroform			1.1	
	dichlorodifluoro-methane			13	
	trichloroethylene			1.1	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

MPCA GWSW/pp files MN Depart. of Natural Resources
Minnesota Geological Survey
Dakota County

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A GROUNDWATER CONTAMINATION 3-mile 02 ☒ OBSERVED (DATE 4/10/89) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 6213 04 NARRATIVE DESCRIPTION observed release documented through non-CLP lab on 2 separate sampling events. 4-mile radius includes Bornsville well for total population 37,574

01 ☒ B SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 0 04 NARRATIVE DESCRIPTION
potential exist for contamination of wetlands and Minnesota River if source is found to discharge through runoff and/or groundwater

01 ☒ C CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
unlikely, given the nature of groundwater contamination

01 ☒ D FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
unknown

01 ☒ E DIRECT CONTACT 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
unknown

01 ☒ F CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED unknown (Acres) 04 NARRATIVE DESCRIPTION
soil contamination is expected due to groundwater contamination

01 ☒ G DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
see "groundwater contamination"

01 ☒ H WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
unknown

01 ☒ I POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
unknown

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE. _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

possible, if contaminants reach wetlands (Nicols Fen). endangered species present

01 ☒ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

unknown

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

unknown

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 6213 — 04 NARRATIVE DESCRIPTION

01 ☒ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

unknown

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

unknown

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

implied from ground water contamination

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 37,574

IV. COMMENTS

Source is unknown at this time

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

MPCA GWSW/PD Files
Minnesota Geological Survey

EPA FORM 2070-12 (7-81)

JAH

AUGUST 28,1989
SUSAN PRICE GWSW/PD/SAU

BREIFING ON SAMPLING EVENTS TO DATE CONCERNING SENECA PUMP-OUT

1. TWIN CITY TESTING (TCT) August 16, 1988 Report to MWCC

- sampling of 6 monitoring wells around building site perimeter.
- sampling protocol not acceptable.
  - wells not properly developed and stabilized, i.e., no pumping or stabilization through pH, conductivity, and temperature.
  - no field or trip blanks taken for QA/QC.
- sampling scheme erratic, no justifications provided.
  - MW-1, MW-2, and MW-5 were the only monitoring wells sampled for VOAs.
  - MW-1 and MW-5 were the only wells tested for semi-VOAs and metals.
- data interpretation
  - discounted methylene chloride (MW-2 = 10 ppb, MW-5 = 9 ppb) as a common lab contaminant (confirmed by Minnesota Valley Testing and PACE).
  - justified occurrance of trichloroethylene as an isolated incident due to the lack of associated degradational products.
    - incorrect assumption, other degradational products may have been below method detection limit (MDL), a recent spill would not allow sufficient degradational time, and/or associated products may be traveling at differential rates.
  - elevated COD in MW-1 and MW-6 could be attributed to high suspended solids and algal content, no comments were made concerning COD or TSS results.

2. TCT October 6, 1988 Report

- sampled MW-1, MW-2, and MW-6.
- only analyzed samples for TCE in MW-2 and COD in MW-1 and MW-6
- same inadequate sampling protocol used in June, 1988 sampling.
- TCT basically ruled out any problems.

3. Ron Spong (Dakota Co. Health) "basement" analysis of 10 residential wells, April 4, 1988.
   - primarily WQ type effluent parameters, no VOAs etc...

4. Minn. Valley Testing Laboratories for Dakota Co. Public Health 4/10/89
   - 9 residential wells limited VOAs and semi-VOAs.
     - Perc .62 ppb
       8.6
       .63
       143.

     Non-Responsive

     - methylene chloride 2.11 ppb
       3.26
       4.63
       5.95
       3.75
       4.71 Trip Blank*

     Non-Responsive

     - TCE 1.1 ppb Arends

     - methylene chloride appears to a lab contaminant.

5. PACE Laboratories 7/20/89

- Same 9 residential wells sampled as Minn. Valley Testing Labs.
  - Perc 13. ppb [redacted]
    9.3
    290.
  - Chloroform 1.1 ppb [redacted]
    .9
    .6
  - Dichlorodifluoromethane (freon) 13. ppb [redacted]
    2.4
    1.6
  - TCE 1.1 ppb [redacted]
  - methylene chloride 1.7 ppb [redacted]
    - lab contaminant

FYI - RALs

TCE 31.0 ppb
Perc 6.6
chloroform 57.0
freon 1400.0

APPENDIX D

RECOMMENDATIONS OF THE SENECA WASTEWATER TREATMENT PLANT MEDIATION ROUNDTABLE

[PLEASE NOTE: After identifying the participating Roundtable organizations in the text of this document, abbreviated versions of the Roundtable organizations' name appear in parentheses. The City of Eagan, for example, is abbreviated to "City." The abbreviated name will be used throughout the remainder of the document.]

The undersigned members of the Seneca Wastewater Treatment Plant Mediation Roundtable ("Roundtable") agree to the following:

WHEREAS, on August 8, 1989, the Minnesota Department of Natural Resources ("DNR") issued an amendment to Temporary Water Appropriation Permit No. 89-6092 which authorizes the Metropolitan Waste Control Commission ("MWCC") to temporarily appropriate ground water for construction at the Seneca Wastewater Treatment Plant ("Seneca"); and

WHEREAS, on September 6, 1989, the City of Eagan, Minnesota ("City"), requested that the DNR hold a contested case hearing on the amendment to Temporary Water Appropriation Permit No. 89-6092; and

WHEREAS, on February 1, 1990, the Honorable Allan W. Klein, Office of Administrative Hearings held a prehearing conference to determine how to proceed with the amended permit and the City's request for a contested case hearing; and

WHEREAS, on February 6, 1990, Judge Klein recommended that the Commissioner of the DNR issue a Notice of and Order for Hearing, setting this matter on for a contested case hearing to begin on or about March 19, 1990, but that the Commissioner of the DNR attempt to settle this matter without a hearing by means of alternative dispute resolution; and

WHEREAS, on February 16, 1990, Steven G. Thorne, Deputy Commissioner of the DNR, issued an order directing the DNR's Division of Waters to enlist the services of a mediator to initiate negotiations among the public entities and citizen groups represented at the prehearing conference held by Judge Klein and postponed setting a hearing date; and

WHEREAS, on January 4, 1990, the MWCC applied for a permanent water appropriation permit for the existing portion of Seneca and a permanent water appropriation permit for the expanded portion of Seneca; and

WHEREAS, during March and April 1990, meetings were held by the Honorable Phyllis Reha, Office of Administrative Hearings, to explore the use of mediator-assisted negotiations to try to resolve the dispute over the amendment to the Temporary Water Appropriation Permit for Seneca and the decision was made by the members involved that the mediation should proceed following the identification of numerous issues related to Seneca which should be mediated; and

WHEREAS, on April 30, 1990, the Roundtable began involving members of the staffs of the MWCC, the DNR Division of Waters, the Minnesota Pollution Control Agency ("PCA"), the Metropolitan Council ("Council"), the Dakota County Public Health Department ("County"), the City, and representatives from the Eagan Chamber of Commerce, the Wuthering Heights Neighborhood

e. "Fen" shall mean the Nicols Meadow Fen.

f. "Dewatering" shall mean the appropriation of water undertaken by the MWCC pursuant to the permanent water appropriation permits for Seneca to be issued by the DNR, unless noted otherwise.

g. "Contamination site" shall mean the Highway 13 and Cedar Avenue Groundwater Contamination Site as identified by the PCA pursuant to the Minnesota Environmental Response and Liability Act.

h. "PCA permit" shall mean National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Permit No. MN 0059137 issued by the PCA.

i. "Associated wetlands" means the wetlands associated with the fen, including Kennealy Creek and the beaver ponds.

2. Each recommendation detailed below is directed exclusively to the specific Roundtable organization identified in the specific recommendation and not any Roundtable organization not identified in the recommendation.

3. Implementation of Recommendations.

a. The recommendations and proposed actions included in this document constitute recommendations from the Roundtable members to the governmental unit or units identified in the specific recommendation. The use of the words "will" or "shall" in any particular recommendation is not intended to imply anything more than a recommendation.

b. Each Roundtable member agrees to present those recommendations applicable to the governmental unit with which he/she is associated for its consideration. Implementation may be in a form appropriate to that unit including a resolution, order, permit, or letter referring to specific recommendations to be adopted by the governing body or responsible individual of each unit. The recommendations are not binding upon a governmental unit unless the governmental unit formally agrees to be bound by a particular recommendation.

c. Execution of this document, and/or issuance of an implementing resolution, order, permit, or letter, will not constitute a contractual agreement among or between the Roundtable members and/or the organizations they represent.

d. The individual signatories to this document agree to take the document back to the Roundtable organization which they represent for the appropriate approval. Pursuant to Issue VII, paragraph 7, the City will withdraw its request only upon approval of the recommendations by all Roundtable organizations.

4. The individual members of the Roundtable shall not be liable in any way for any action taken or inaction with respect to any recommendation, whether adopted or not, or for the failure of any governmental unit to adopt any recommendation.

public meeting in the City or any other meeting of the PCA Board to take action on the report.

6. The City will notify the non-governmental agency Roundtable organizations of the availability of any reports received by the City and will further confirm the scheduling of any public meeting held by the City concerning the contamination issue.

7. The City will provide public notice through the local newspaper, as well as posting notice at City Hall, of any public meeting held by the City regarding issues concerning groundwater contamination at the contamination site and/or the groundwater recharge well system being installed by the MWCC.

8. The PCA permit for the groundwater recharge well system requires that the MWCC test the observation/monitoring wells for water quality (38 parameters of organic and/or inorganic compounds) on a monthly basis for the first six months of the operation of the recharge well system beginning June, 1990, and quarterly thereafter, for the duration of the recharge system. The MWCC will test for the 38 parameters specified in the PCA permit at no less than quarterly intervals, whether or not water is being injected, until the expiration of the PCA permit on December 31, 1992. The MWCC may conduct additional testing for pollutants or at its option, the MWCC may contract with an outside approved lab to conduct this testing.

9. All written results of the testing being conducted under the PCA permit or otherwise shall be provided by the MWCC to the PCA, the County and the City.

10. The City will notify and make available to the Roundtable organizations the results of the quarterly testing required under the PCA permit.

11. Prior to the reissuance or extension of the PCA permit, the PCA will hold a public meeting in the City of Eagan and invite comment from Roundtable organizations. Issues that may be addressed in the permit process shall include, but shall not be limited to, whether it is appropriate to require continued monitoring of both the dewatering wells and the injection observation wells and also, whether the list of the contaminants currently being tested should be changed.

12. No Roundtable organization waives its right to conduct an independent study of the contamination site to determine the source of groundwater contamination or to determine whether the dewatering by the MWCC at Seneca is in any way contributing to the movement of groundwater contamination. No Roundtable organization will be prevented by another Roundtable organization from doing such an independent study upon notice to the appropriate Roundtable organization.

13. The Roundtable members take no position with respect to efforts by individuals or subgroupings of the Roundtable members to lobby for special legislation or increase funding to deal with groundwater contamination issues specifically as they relate to the contamination site. By signing this document, no member waives his/her rights to lobby in these regards.

fen and the condition of the vegetation in the fen to the MWCC for inclusion in the MWCC's status report at critical times in the natural cycle of unique fen vegetation, which information shall be provided at least twice a year. The DNR may also issue separate reports of the fen vegetation to the Roundtable organizations if no current MWCC status report is anticipated to be issued.

6. The status reports being prepared by the MWCC shall continue through December 31, 1992 at which time the Roundtable organizations will review the status report requirement as part of the 1993 PCA permit review process during the public meeting held pursuant to Issue I, paragraph 11.

Any remedial action which may be required to correct groundwater contamination in the contamination site shall not impact the fen to the extent possible.

7. That the DNR support legislation that would amend the present state law to provide greater protection to fens throughout the State of Minnesota.

8. That each member in this Roundtable support the proposed Minnesota State Park Natural and Cultural Resource Inventory and Assessment, Part II(D). (LCMR proposal.)

9. The Roundtable members recognize that the MWCC has taken steps to alleviate impacts on the fen and encourage the MWCC to continue their efforts to alleviate any further or future impact on the fen.

10. The PCA will provide copies of the MWCC's proposed contingency plan, to all the Roundtable organizations prior to the PCA approval of the contingency plan.

11. Any comments submitted by the Roundtable members to the PCA with regard to the contents of the MWCC's proposed contingency plan must be received by the PCA within two weeks of the date the proposed plan was made available to the Roundtable members.

1 Except in a bona fide emergency situation as reasonably determined by the DNR, PCA and MWCC, the MWCC shall provide written notice to all Roundtable organizations, of at least five days, prior to the implementation of any alternative to the groundwater recharge well system. In the case of emergency, notice of any action taken by the MWCC shall be provided to all Roundtable organizations as soon as possible.

13. The DNR will consult with the County and the City before taking any action to determine the appropriate fen mitigation measures or requiring replacement of the fen by any person or entity.

ISSUE III: MAINTENANCE

•GENERAL STATEMENT: The operation and maintenance of Seneca will be conducted to optimize operational efficiency and protection of the environment around Seneca.

To accomplish this goal, Roundtable members recommend the following:

ISSUE IV: DEWATERING

•GENERAL STATEMENT: Roundtable members' interests regarding dewatering at Seneca include encouraging water conservation, encouraging better maintenance, encouraging better operations, and protecting the environment consistent with state law.

To accomplish these goals, Roundtable members recommend the following:

1. Current state law provides that each consumptive water appropriation exceeding 2 millions gallons per day average, within a 30 day period, requires legislative approval. It is the intent of the MWCC to use all reasonable efforts to maintain permanent dewatering at Seneca at less than the statutory figure. If the MWCC determines there is a need to exceed the statutory figure, the MWCC and/or DNR will go to the legislature for approval of the excess. Prior to submission of the request to the legislature, the MWCC will notify and meet with representatives of Roundtable organizations and present factual evidence of why the statutory figure will be exceeded. The MWCC presentation will include consideration of the impact exceeding the statutory figure will have on the fen, critical water levels, and water conservation.

2. The two permanent water appropriation permits for Seneca shall provide in aggregate for water appropriation of up to 2.1 million gallons per day, daily average on a yearly basis. Should the MWCC need to exceed this figure, it shall apply for a permit amendment in accordance with DNR rules.

3. The DNR will provide annual water use data to the City indicating the amounts dewatered under the water appropriation permits for Seneca. The DNR will notify all Roundtable organizations that copies of the data are available to any Roundtable organization.

4. The DNR will annually review the rates and volume of dewatering at Seneca. This review may include a public information meeting during which relevant public comments will be solicited. All Roundtable organizations will be notified of this meeting by the City.

ISSUE V: WATER CONSERVATION

•GENERAL STATEMENT: The Roundtable members consider conservation of water resources a vital element to reducing the cost of wastewater treatment, the construction of new wastewater treatment facilities, minimize effects on the environment, and to insure adequate future water supplies.

Roundtable members recommend the following:

1. The Roundtable members encourage each individual member to support and encourage such groups as the League of Minnesota Cities and the Association of Metropolitan Municipalities to further the following water conservation goals:

    a. Adoption of statewide building codes that require all new construction to install water conservation plumbing fixtures;

would require expansion of Seneca. The Roundtable may be reconvened to discuss the proposal pursuant to the process set forth in the first paragraph of this section.

4. The Roundtable may be reconvened if requested by the City and/or MWCC to discuss issues concerning Seneca which are outside the scope of these recommendations.

5. Each Roundtable organization will be responsible for appointing a replacement member representing the same interests should the present member be unable to continue active participation in the Roundtable and will be responsible for notifying the remaining Roundtable organizations of the replacement.

6. Roundtable organizations need not participate in any meeting held pursuant to this section which the organization determines does not involve issues related to the interests of the Roundtable organization.

7 The Roundtable members recommend that following approval of this document by the Roundtable organizations, the City withdraw its demand for a hearing regarding the amendment to Temporary Water Appropriation Permit No. 89-6092. This withdrawal will only take affect upon all organizations agreeing to the recommendations.

8. If the provisions set forth in Issue IV, paragraph 2, are incorporated into the permanent water appropriation permits and the permits are issued in substantial conformance with the draft permits included with this document as Exhibit A, the Roundtable members recommend that neither the City, nor any other Roundtable organization with standing, request a hearing on the permanent water appropriation permits.

9. By agreeing to this document, no Roundtable organization waives its right to challenge the policy interpretation of any governmental unit.

THIS DOCUMENT WILL BE EXECUTED ON MULTIPLE SIGNATURE PAGES, EACH OF WHICH SHALL BE AN ORIGINAL, BUT SUCH SIGNATURE PAGES TOGETHER SHALL CONSTITUTE ONE AND THE SAME DOCUMENT.

528-02

epartment of MINNESOTA Natural Resources
Division of Waters

WATER APPROPRIATION PERMIT

500 Lafayette Road
St. Paul, MN 55155-4032

PERMIT	
90-6262	
COUNTY	
Dakota	

opriation authorized by this permit must also be consistent with the applicable sions of Permit #91-6073.

MATTER OF THE APPLICATION FOR APPROPRIATION OF WATERS OF THE STATE. PERMISSION IS HEREBY GRANTED TO

TEE	Authorized Agent
etropolitan Waste Control Commission	C.R. Payne

ss
30 E. 5th St., St. Paul, MN 55101

propriate From

groundwater via an existing underdrain system at a daily average rate not to xceed 625 gpm. Primary discharge to 18" CMP outfall and to Minnesota River in ccordance with NPDES Permit #0059137.

se.
permanent dewatering beneath original waste water treatment plant to prevent str ural damage.

rty Described as.

The Seneca Waste Water Treatment Plant located in the SE 1/4 NE 1/4 Section 18, Township 27 North, Range 23 West, Dakota County

ed Signature	Title	Date
d D. Harnack	Administrator Permits and Land Use Section	

ermit is granted subject to the following **CONDITIONS:**

QUANTITY:

he permittee is authorized to appropriate water at a rate not to exceed ~~XXX~~ gallons per minute. The total amount of water appropriated shall not exceed ~~XXX~~ acre feet or 329 million gallons per year. (See Additional Condition #14)

LIMITATIONS:

(a) Any violation of the terms and provisions of this permit and any appropriation of the waters of the state in excess of that authorized hereon shall constitute a violation of Minnesota Statutes, Chapter 105.

(b) This permit shall not be construed as establishing any priority of appropriation of waters of the state.

(c) This permit is permissive only. No liability shall be imposed upon or incurred by the State of Minnesota or any of its employees, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the permittee relating to any matter hereunder. This permit shall not be construed as estopping or limiting any legal claims or right of action of any person other than the state against the permittee, for any damage or injury resulting from any such act or omission, or as stopping or limiting any legal claim or right of action of the state against the permittee, for violation of or failure to comply with the provisions of the permit or applicable provisions of law.

(d.) In all cases where the doing by the permittee of anything authorized by this permit shall involve the taking, using, or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, the permittee, before proceeding therewith, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all property, rights and interests necessary therefore.

(e.) This permit shall not release the permittee from any other permit requirements or liability or obligation imposed by Minnesota Statutes, Federal Law or local ordinances relating thereto and shall remain in force subject to all conditions and limitations now or hereafter imposed by law.

(f.) Unless explicitly specified, this permit does not authorize any alterations of the beds or banks of any public (protected) waters or wetlands. A separate permit must be obtained from the Department of Natural Resources prior to any such alteration.

OVER

EXHIBIT A

PERMIT #90-6262

DATED: _____

BY: _____

ATTACHMENT B

Monitoring Conditions

1. Water levels to be monitored:

   Observation Wells 4, 4A, 5, 6 and 10
   Monitoring Wells 3, 7A, 8A and 9A
   Fen Wells 1, 2, 3 and 4

2. Flows to be monitored:

   Kennealy Creek at the railroad bridge
   Total discharge from the dewatering system

3. Monitoring schedule:

   Water levels in all wells and flows at both stations are to be recorded twice monthly except during the initiation of recharge.

   During initiation of recharge levels and flows shall be recorded weekly.

4. Reporting:

   MWCC staff shall supply raw data, charts and hydrographs to the Division of Waters on a quarterly basis.

02628-02

Department of Natural Resources
Division of Waters

WATER APPROPRIATION PERMIT

500 Lafayette Road
St. Paul, MN 55155-4032

PERMIT	91-6073
COUNTY	Dakota

ropriation authorized by this permit must also be consistent with the applicable visions of Permit #90-6262.

E MATTER OF THE APPLICATION FOR APPROPRIATION OF WATERS OF THE STATE, PERMISSION IS HEREBY GRANTED TO

MITTEE	Authorized Agent
Metropolitan Waste Control Commission	C.R. Payne

ss
230 E. 5th St., St. Paul, MN 55101

Appropriate From

via new underdrain system at a daily average rate not to exceed 833 gallons per minute. Primary discharge to 18" CMP outfall and to Minnesota River in accordance with NPDES Permit #0059137.

ose.
permanent dewatering beneath the process tanks and access tunnels to prevent s ctural damage.

perty Described as:

The Seneca Waste Water Treatment Plant (1990 upgrade and expansion site) located in the SE 1/4 NE 1/4 Section 18, Township 27 North, Range 23 West, Dakota County

horized Signature	Title	Date
Ronald D. Harnack	Administrator Permits and Land Use Section	

ermit is granted subject to the following **CONDITIONS:**

1. **QUANTITY:**
The permittee is authorized to appropriate water at a rate not to exceed * gallons per minute The total amount of water appropriated shall not exceed xxx acre feet or 438 million gallons per year* (See Additional Condition #14)

2. **LIMITATIONS:**

(a) Any violation of the terms and provisions of this permit and any appropriation of the waters of the state in excess of that authorized hereon shall constitute a violation of Minnesota Statutes, Chapter 105

(b.) This permit shall not be construed as establishing any priority of appropriation of waters of the state.

(c) This permit is permissive only No liability shall be imposed upon or incurred by the State of Minnesota or any of its employees, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the permittee relating to any matter hereunder This permit shall not be construed as estopping or limiting any legal claims or right of action of any person other than the state against the permittee, for any damage or injury resulting from any such act or omission, or as stopping or limiting any legal claim or right of action of the state against the permittee, for violation of or failure to comply with the provisions of the permit or applicable provisions of law

(d.) In all cases where the doing by the permittee of anything authorized by this permit shall involve the taking, using, or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, the permittee, before proceeding therewith, shall obtain the written consent of all persons, agencies or authorities concerned, and shall acquire all property, rights and interests necessary therefore.

(e) This permit shall not release the permittee from any other permit requirements or liability or obligation imposed by Minnesota Statutes Federal Law or local ordinances relating thereto and shall remain in force subject to all conditions and limitations now or hereafter imposed by law

(f) Unless explicitly specified, this permit does not authorize any alterations of the beds or banks of any public (protected) waters or wetlands A separate permit must be obtained from the Department of Natural Resources prior to any such alteration

PERMIT #91-6073

DATED: _____

BY: _____

ATTACHMENT B

Monitoring Conditions

1. Water levels to be monitored:

   Observation Wells 4, 4A, 5, 6 and 10
   Monitoring Wells 3, 7A, 8A and 9A
   Fen Wells 1, 2, 3 and 4

2. Flows to be monitored:

   Kennealy Creek at the railroad bridge
   Total discharge from the dewatering system

3. Monitoring schedule:

   Water levels in all wells and flows at both stations are to be recorded twice monthly except during the initiation of recharge.

   During initiation of recharge levels and flows shall be recorded weekly.

4. Reporting:

   MWCC staff shall supply raw data, charts and hydrographs to the Division of Waters on a quarterly basis.

APPENDIX E

NPL Characteristics Data Collection Form
NICHOLS GROUND WATER CONTAMINATION - 09/11/92

Record Information

1. Site Name: NICHOLS GROUND WATER CONTAMINATION
   (as entered in CERCLIS)
2. Site CERCLIS Number: MND985681246
3. Site Reviewer: GLKrueger
4. Date: 7/29/92
5. Site Location: Eagan, Dakota, Minnesota
   (City/County,State)
6. Congressional District: 3
7. Site Coordinates: Unknown

   Latitude: Longitude:

Site Description

1. Setting: Suburban
2. Current Owner: Unknown
3. Current Site Status: Site with Unknown Source
4. Years of Operation: Unknown
5. How Initially Identified: Unknown
6. Entity Responsible for Waste Generation:

   - Unknown

7. Site Activities/Waste Deposition:

   - Unknown

Waste Description

8. Wastes Deposited or Detected Onsite:

- Organic Chemicals

Response Actions

9. Response/Removal Actions:

   - Drinking Water Well Has Been Closed

RCRA Information

10. For All Active Facilities, RCRA Site Status:

    - Not Applicable

Demographic Information

11. Workers Present Onsite: Unknown

12. Distance to Nearest Non-Worker Individual: Unknown

13. Residential Population Within 1 Mile: 0.0

14. Residential Population Within 4 Miles: 50000.0

Water Use Information

15. Local Drinking Water Supply Source:

    - Ground Water (within 4 mile distance limit)

16. Total Population Served by Local Drinking Water Supply Source: 90000.0

17. Drinking Water Supply System Type for Local Drinking Water Supply Sources:

    - Municipal (Services over 25 People)
    - Private

18. Surface Water Adjacent to/Draining Site:

    - Wetland
    - River

OMB Approval Number: 2050-0095
Approved for Use Through: 1/92

EPA Potential Hazardous Waste Site Preliminary Assessment Form

Identification

State: MN | CERCLIS Number: MND985681246

CERCLIS Discovery Date:

1. General Site Information

Name:	Street Address:
Nichols Ground Water Contamination	Highway 13 and Cedar Avenue

City:	State:	Zip Code:	County:	Co. Code:	Cong. Dist:
Eagan	MN		Ramsey		3

Latitude:	Longitude:	Approximate Area of Site:	Status of Site:
___° ___' ___.___"	___° ___' ___.___"	N/A Acres _____ Square Ft	☐ Active ☐ Not Specified ☐ Inactive ☒ NA (GW plume, etc.)

2. Owner/Operator Information N/A Ground Water Plume

Owner:	Operator:
Street Address:	Street Address:
City:	City:
State: Zip Code: Telephone: ( )	State: Zip Code: Telephone: ( )

Type of Ownership:
- ☐ Private
- ☐ Federal Agency — Name _____
- ☐ State
- ☐ Indian
- ☐ County
- ☐ Municipal
- ☐ Not Specified
- ☐ Other _____

How Initially Identified:
- ☐ Citizen Complaint
- ☐ PA Petition
- ☒ State/Local Program
- ☐ RCRA/CERCLA Notification
- ☐ Federal Program
- ☐ Incidental
- ☐ Not Specified
- ☐ Other _____

3. Site Evaluator Information

Name of Evaluator:	Agency/Organization:	Date Prepared:
Gary L Krueger	MPCA	9/16/92

Street Address:	City:	State:
520 Lafayette Road	St. Paul	MN

Name of EPA or State Agency Contact:	Street Address:	
City:	State:	Telephone: (612) 296-6139

4. Site Disposition (for EPA use only)

Emergency Response/Removal Assessment Recommendation:
- ☐ Yes
- ☒ No
- Date: _____

CERCLIS Recommendation:
- ☐ Higher Priority SI
- ☐ Lower Priority SI
- ☒ NFRAP
- ☐ RCRA
- ☐ Other _____
- Date: _____

Signature: Gary L Krueger

Name (typed):

Position: Senior Pollution Control Specialist

EPA Potential Hazardous Waste Site
~~Preliminary Assessment~~ Form - Page 2 of 4

CERCLIS Number: MND985568246

5. General Site Characteristics

Predominant Land Uses Within 1 Mile of Site (check all that apply):
- ☐ Industrial
- ☐ Agriculture
- ☐ DOI
- ☒ Commercial
- ☐ Mining
- ☐ Other Federal Facility
- ☒ Residential
- ☐ DOD
- ☐ Forest/Fields
- ☐ DOE
- ☐ Other

Site Setting:
- ☐ Urban
- ☒ Suburban
- ☐ Rural

Years of Operation: N/A
Beginning Year
Ending Year
☐ Unknown

Type of Site Operations (check all that apply): N/A
- ☐ Manufacturing (must check subcategory)
  - ☐ Lumber and Wood Products
  - ☐ Inorganic Chemicals
  - ☐ Plastic and/or Rubber Products
  - ☐ Paints, Varnishes
  - ☐ Industrial Organic Chemicals
  - ☐ Agricultural Chemicals (e.g., pesticides, fertilizers)
  - ☐ Miscellaneous Chemical Products (e.g., adhesives, explosives, ink)
  - ☐ Primary Metals
  - ☐ Metal Coating, Plating, Engraving
  - ☐ Metal Forging, Stamping
  - ☐ Fabricated Structural Metal Products
  - ☐ Electronic Equipment
  - ☐ Other Manufacturing
- ☐ Mining
  - ☐ Metals
  - ☐ Coal
  - ☐ Oil and Gas
  - ☐ Non-metallic Minerals
- ☐ Retail
- ☐ Recycling
- ☐ Junk/Salvage Yard
- ☐ Municipal Landfill
- ☐ Other Landfill
- ☐ DOD
- ☐ DOE
- ☐ DOI
- ☐ Other Federal Facility
- ☐ RCRA
  - ☐ Treatment, Storage, or Disposal
  - ☐ Large Quantity Generator
  - ☐ Small Quantity Generator
  - ☐ Subtitle D
    - ☐ Municipal
    - ☐ Industrial
  - ☐ "Converter"
  - ☐ "Protective Filer"
  - ☐ "Non- or Late Filer"
- ☐ Not Specified
- ☐ Other

Waste Generated:
- ☐ Onsite
- ☐ Offsite
- ☒ Onsite and Offsite

Waste Deposition Authorized By:
- ☐ Present Owner
- ☐ Former Owner
- ☐ Present & Former Owner
- ☐ Unauthorized
- ☒ Unknown

Waste Accessible to the Public:
- ☐ Yes
- ☒ No

Distance to Nearest Dwelling, School, or Workplace:
N/A Feet

6. Waste Characteristics Information

Source Type: (check all that apply)	Source Waste Quantity: (include units)	Tier*:
☐ Landfill		
☐ Surface Impoundment		
☐ Drums		
☐ Tanks and Non-Drum Containers		
☐ Chemical Waste Pile		
☐ Scrap Metal or Junk Pile		
☐ Tailings Pile		
☐ Trash Pile (open dump)		
☐ Land Treatment		
☒ Contaminated Ground Water Plume (unidentified source)		
☐ Contaminated Surface Water/Sediment (unidentified source)		
☐ Contaminated Soil		
☐ Other		
☒ No Sources	No Identified Source For Plume	

* C = Constituent, W = Wastestream, V = Volume, A = Area

General Types of Waste (check all that apply)
- ☐ Metals
- ☒ Organics
- ☐ Inorganics
- ☐ Solvents
- ☐ Paints/Pigments
- ☐ Laboratory/Hospital Waste
- ☐ Radioactive Waste
- ☐ Construction/Demolition Waste
- ☐ Pesticides/Herbicides
- ☐ Acids/Bases
- ☐ Oily Waste
- ☐ Municipal Waste
- ☐ Mining Waste
- ☐ Explosives
- ☐ Other

Physical State of Waste as Deposited (check all that apply):
- ☐ Solid
- ☐ Sludge
- ☐ Powder
- ☒ Liquid
- ☐ Gas

EPA **Potential Hazardous Waste Site**
Preliminary Assessment Form - Page 3 of 4

CERCLIS Number: MND985681246

7. Ground Water Pathway

Is Ground Water Used for Drinking Water Within 4 Miles:
- [x] Yes
- [ ] No

Is There a Suspected Release to Ground Water:
- [x] Yes
- [ ] No

List Secondary Target Population Served by Ground Water Withdrawn From:

0 - ¼ Mile	
> ¼ - ½ Mile	
> ½ - 1 Mile	
> 1 - 2 Miles	14,000
> 2 - 3 Miles	19,500
> 3 - 4 Miles	48,000
Total Within 4 Miles	81,500

Type of Drinking Water Wells Within 4 Miles (check all that apply):
- [x] Municipal
- [x] Private
- [ ] None

Have Primary Target Drinking Water Wells Been Identified:
- [x] Yes
- [ ] No

If Yes, Enter Primary Target Population: 220-25 People

Depth to Shallowest Aquifer: _____ Feet

Karst Terrain/Aquifer Present:
- [ ] Yes
- [ ] No

Nearest Designated Wellhead Protection Area:
- [ ] Underlies Site
- [ ] > 0 - 4 Miles
- [ ] None Within 4 Miles

8. Surface Water Pathway

Type of Surface Water Draining Site and 15 Miles Downstream (check all that apply):
- [ ] Stream
- [x] River
- [ ] Pond
- [ ] Lake
- [ ] Bay
- [ ] Ocean
- [ ] Other _____

Shortest Overland Distance From Any Source to Surface Water: N/A _____ Feet _____ Miles

Is There a Suspected Release to Surface Water:
- [x] Yes GW to Sw Discharge
- [ ] No

Site is Located in: N/A
- [ ] Annual - 10 yr Floodplain
- [ ] > 10 yr - 100 yr Floodplain
- [ ] > 100 yr - 500 yr Floodplain
- [ ] > 500 yr Floodplain

Drinking Water Intakes Located Along the Surface Water Migration Path:
- [ ] Yes
- [x] No

Have Primary Target Drinking Water Intakes Been Identified:
- [ ] Yes
- [ ] No

If Yes, Enter Population Served by Primary Target Intakes: _____ People

List All Secondary Target Drinking Water Intakes:

Name	Water Body	Flow (cfs)	Population Served

Total within 15 Miles _____

Fisheries Located Along the Surface Water Migration Path:
- [x] Yes
- [ ] No

Have Primary Target Fisheries Been Identified:
- [ ] Yes
- [x] No

List All Secondary Target Fisheries:

Water Body/Fishery Name	Flow (cfs)
Minnesota River	
Mississippi River	11,000

EPA Potential Hazardous Waste Site
Preliminary Assessment Form - Page 4 of 4

CERCLIS Number: MND 985681246

8. Surface Water Pathway (continued)

Wetlands Located Along the Surface Water Migration Path:
- ☒ Yes
- ☐ No

Have Primary Target Wetlands Been Identified:
- ☐ Yes
- ☒ No

List Secondary Target Wetlands:

Water Body	Flow (cfs)	Frontage Miles

Other Sensitive Environments Located Along the Surface Water Migration Path:
- ☒ Yes
- ☐ No

Have Primary Target Sensitive Environments Been Identified:
- ☒ Yes Nichols Meadow Fen
- ☐ No

List Secondary Target Sensitive Environments:

~~Water Body~~	Flow (cfs)	Sensitive Environment Type
		Minnesota National Wildlife Refuge

9. Soil Exposure Pathway N/A

Are People Occupying Residences or Attending School or Daycare on or Within 200 Feet of Areas of Known or Suspected Contamination:
- ☐ Yes
- ☐ No

If Yes, Enter Total Resident Population:

_____ People

Number of Workers Onsite:
- ☐ None
- ☐ 1 - 100
- ☐ 101 - 1,000
- ☐ > 1,000

Have Terrestrial Sensitive Environments Been Identified on or Within 200 Feet of Areas of Known or Suspected Contamination:
- ☐ Yes
- ☐ No

If Yes, List Each Terrestrial Sensitive Environment:

_____

_____

10. Air Pathway N/A

Is There a Suspected Release to Air:
- ☐ Yes
- ☐ No

Enter Total Population on or Within:

Onsite	
0 - ¼ Mile	
> ¼ - ½ Mile	
> ½ - 1 Mile	
> 1 - 2 Miles	
> 2 - 3 Miles	
> 3 - 4 Miles	
Total Within 4 Miles	

Wetlands Located Within 4 Miles of the Site:
- ☐ Yes
- ☐ No

Other Sensitive Environments Located Within 4 Miles of the Site:
- ☐ Yes
- ☐ No

List All Sensitive Environments Within ½ Mile of the Site:

Distance	Sensitive Environment Type/Wetlands Area (acres)
Onsite	
0 - ¼ Mile	
> ¼ - ½ Mile	